

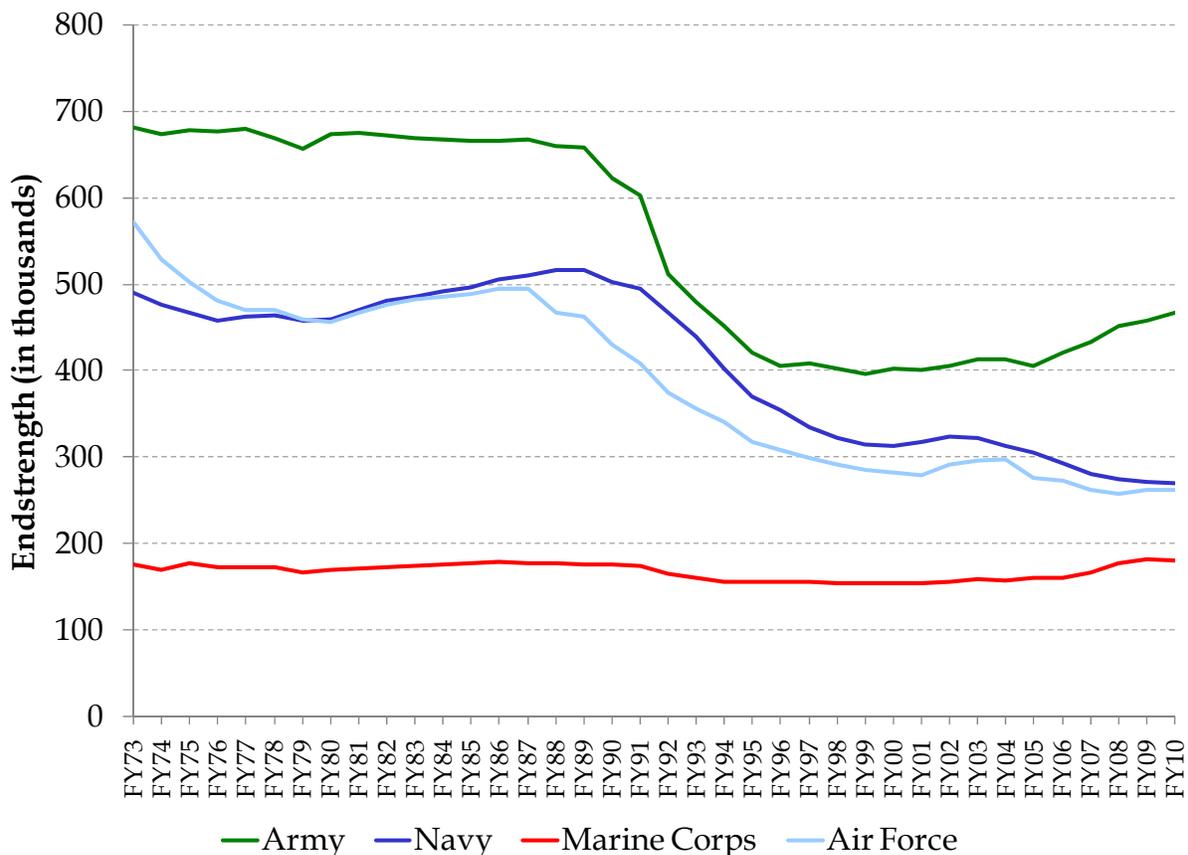
## Section II: DoD active component (AC)

This section describes the applicant pool, accessions, and endstrength for both enlisted personnel and commissioned officers in the AC. After discussing level trends for these groups, we provide descriptive statistics on age, quality, marital status, race/ethnicity, gender, and geographic representation.

### Enlisted endstrength and accessions

The active duty enlisted endstrength was 1,183,000 in FY10, comprising 83 percent of the total AC endstrength for the year (see figure 1).

**Figure 1. AC enlisted endstrength, by service, FY73–FY10**



Note: Data are from appendix table D-11. Enlisted endstrength includes non-prior service (NPS) and prior service (PS) enlisted members.

The Army’s enlisted endstrength decreased over the 1990s to 58 percent of its FY73 size. It stabilized around 400,000 during the early 2000s, and, between FY06 and FY10, it

grew to 470,000.<sup>5</sup> In FY10, Army enlisted personnel made up 40 percent of all DoD AC enlisted personnel – its highest proportion since FY73. The Marine Corps has been the smallest of the DoD services for the past 40 years, but, while all the services shrank during the 1990s, the Marine Corps shrank the least.<sup>6</sup> By FY99, the Marine Corps was 88 percent of its FY73 enlisted endstrength, while the Air Force, Army, and Navy were 50, 58, and 64 percent of their respective FY73 totals. In fact, as a proportion of DoD enlisted endstrength, the Marine Corps grew from 9 to 15 percent between FY73 and FY10, reaching an FY10 enlisted endstrength of 181,000; the Marine Corps increased its enlisted endstrength when Congress increased authorized endstrength for the Army and the Marine Corps in FY07. Enlisted endstrength in the Navy and Air Force were approximately equal in size and experienced similar growth patterns between FY73 and FY10; each made up 23 percent of DoD enlisted personnel in FY10, down from their respective FY73 proportions of 26 and 30 percent. From FY01 to FY10, the Army and the Marine Corps grew while the Navy and Air Force contracted, largely because of their wartime roles.

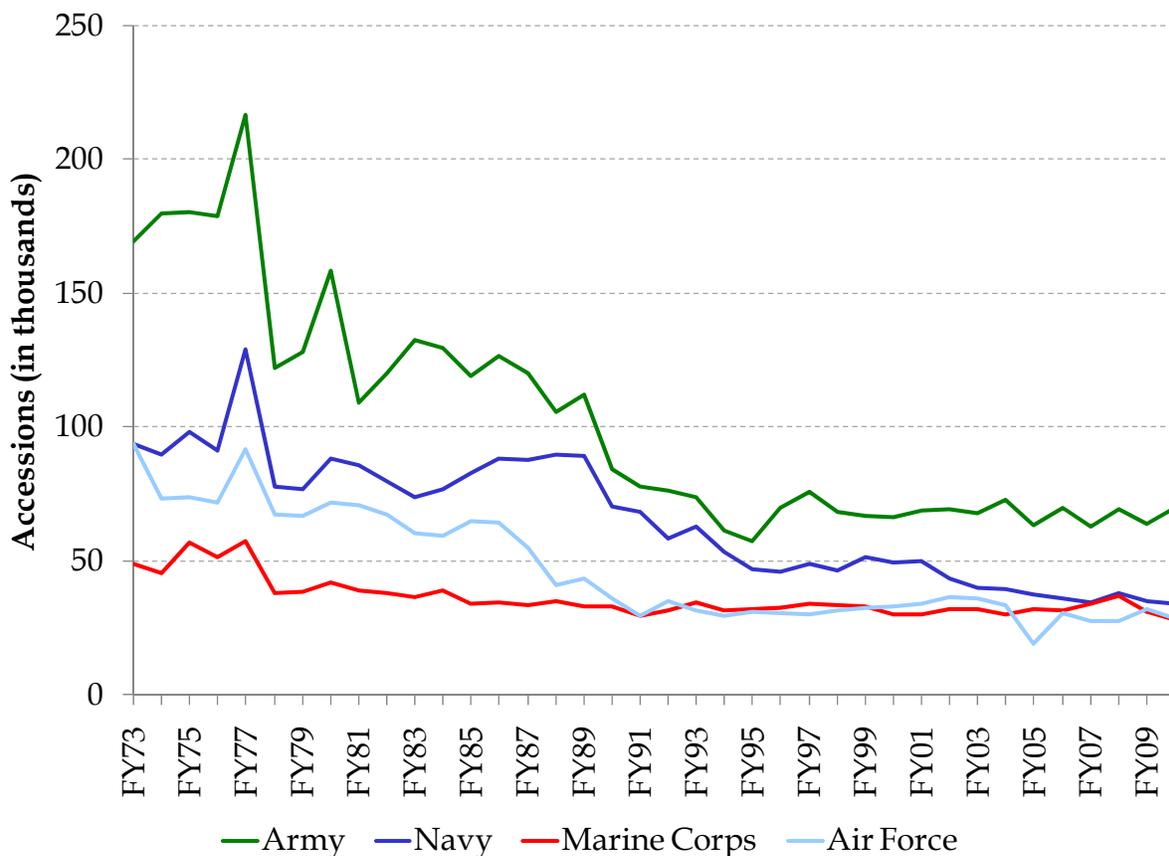
In figure 2, we show the number of non-prior service (NPS) enlisted accessions from FY73 to FY10. Since prior service (PS) enlisted accessions make up only a small fraction of total enlisted accessions – 4 percent in FY10 – we do not present PS accessions in our figures. Similar to enlisted endstrength, accessions declined between FY73 and FY10; however, unlike enlisted endstrength, which sharply declined during the 1990s, accessions steadily fell between the late 1970s and early 1990s. In FY10, Army, Air Force, and Navy NPS accessions were less than half the size of their FY73 accessions, while enlisted endstrength for these three services were more than half of their FY73 totals. Fewer accessions for a given endstrength contribute to an older enlisted population. In contrast, the Marine Corps' FY10 accessions were just as high as the Navy's and Air Force's, despite its smaller size, because – by design – it tends to be a younger force. From FY08 to FY10, however, the Marine Corps' endstrength stayed relatively constant and its accessions decreased; the difference is due to increased retention.

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<sup>5</sup> The data shown in all figures in sections II, III, and IV are for all years available from the appendix tables, unless otherwise noted.

<sup>6</sup> The U.S. Coast Guard is not included in this section because it is part of DHS (non-DoD); section IV describes the U.S. Coast Guard.

**Figure 2. AC enlisted accessions, FY73–FY10**



Note: Data are from appendix table D-4. Enlisted accessions include only NPS accessions. The data point for FY77 is unusually high because of an extra “transition quarter” when the end of the fiscal year was changed from June 30 to September 30.

## AC officer gains, officer corps, and enlisted-to-officer ratio

In this subsection, we describe the historical trends in DoD AC commissioned officer gains and the commissioned officer corps, as well as the enlisted-to-officer ratio for each of the services.<sup>7</sup> For simplicity, we refer to commissioned officers simply as “officers” for the remainder of the report.<sup>8</sup>

Starting from a high of 300,000 in FY73, the DoD officer corps shrank by 20 percent after the institution of the all-volunteer force. The officer corps grew by 20 percent during the 1980s and gradually fell again to 215,000 in FY10 (see appendix table D-17). In comparison, officer gains reached 32,000 in FY73, but they dropped to about 25,500 in

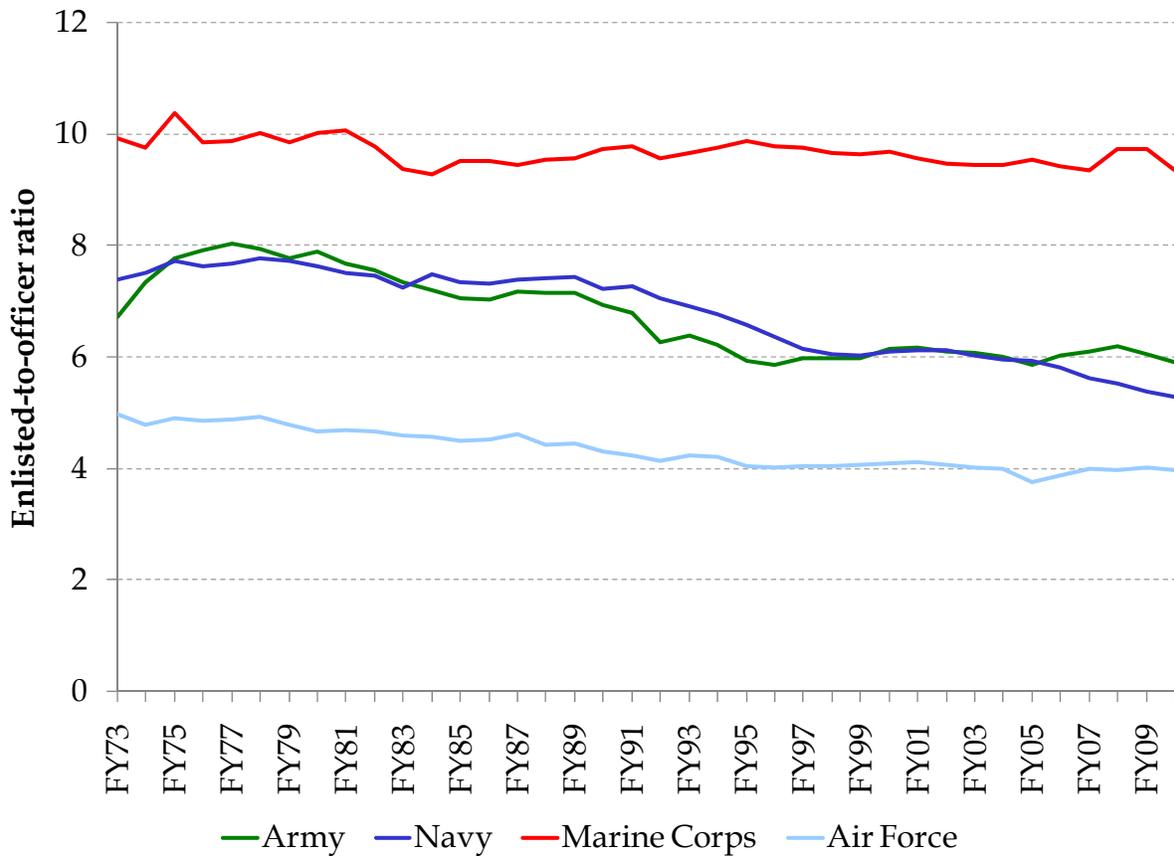
<sup>7</sup> Officer gains are officers new to DMDC’s officer database, whereas the officer corps is the total number of officers available in a particular service. See footnote 2 in section I for a precise definition.

<sup>8</sup> As noted above, given the small number of warrant officers we exclude warrant officers from our analysis.

FY85 and fell even further to 15,000 in FY93. They rose to 21,500 in FY02 but dropped back to 18,000 by FY10 (see appendix table D-15).<sup>9</sup> In terms of percentages, officer gains fell by more than the officer corps (44 percent compared with 28 percent).

Although Congress sets authorized endstrength, each service determines its own enlisted-to-officer ratio (see figure 3). The Marine Corps, notably, has the highest ratio of enlisted personnel to officers, ranging from 9.3 to 10.4 over nearly 40 years. The Air Force is at the other end of the spectrum; in FY73, there were only 5.0 enlisted personnel for every officer, and, in FY10, that ratio fell to 4.0. The Army and Navy have similar historical trends; both had highs of 8.0 enlisted personnel per officer in the late FY70s, but their ratios fell to 5.9 and 5.3, respectively, in FY10.

**Figure 3. AC enlisted-to-officer ratio, by service, FY73–FY10**



Note: Data are from appendix table D-17.

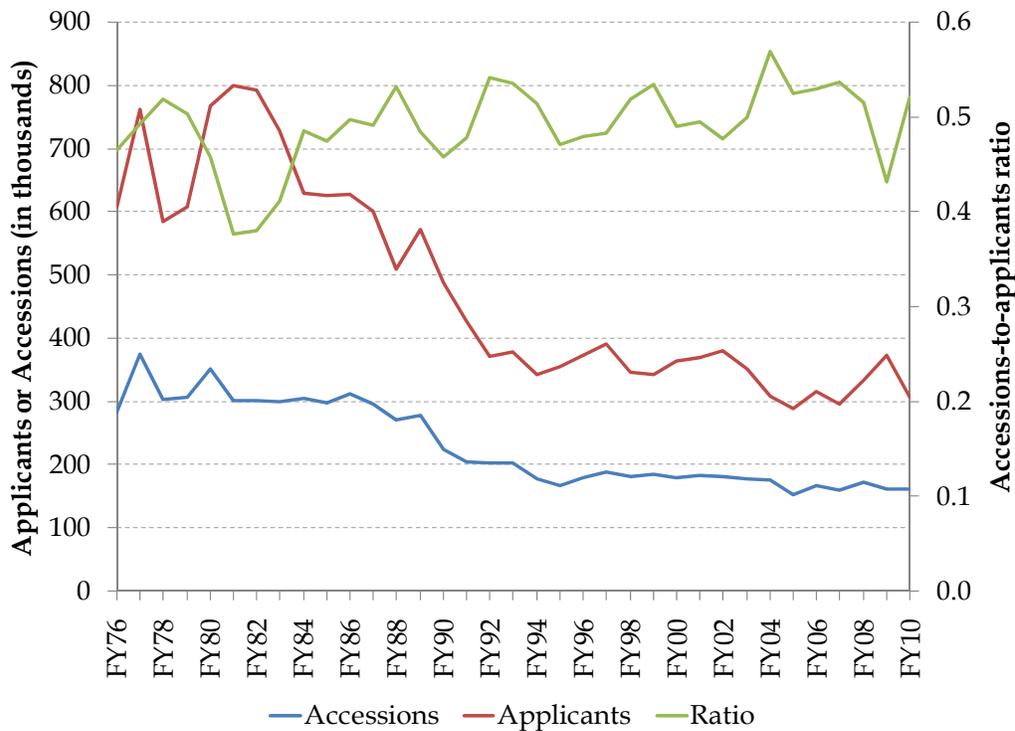
<sup>9</sup> See footnote 2 in section I for a formal definition of accessions and gains.

## NPS enlisted applicants, enlisted accessions, and enlisted endstrength

In figure 4, we present the number of applicants and NPS accessions across all DoD services for FY76 to FY10. Over 308,000 people applied for enlisted service in FY10, while NPS accessions across the four services totaled 160,510 in FY10—half of the FY76 applicant and accession levels. Because the number of applicants fell more rapidly than accessions, the enlisted accession-to-applicant ratio grew, albeit with much fluctuation, from 38 percent of applicants accessed in the early 1980s to one accession for every two applicants (52 percent) in FY10.

There are a number of reasons why an applicant for enlisted service may not be permitted to serve or does not end up serving in the U.S. military. An applicant will not be accessed if his or her Armed Services Vocational Aptitude Battery (ASVAB) score is too low or if he or she fails the physical fitness or psychological standards exams. In addition, an applicant will not be accessed if he or she has disqualifying prior drug use or criminal activity, unless he or she is eligible for an accession waiver. Furthermore, some applicants simply change their minds and decide not to enter military service.

**Figure 4. AC enlisted applicants, NPS enlisted accessions, and the accessions-to-applicants ratio, FY76–FY10**

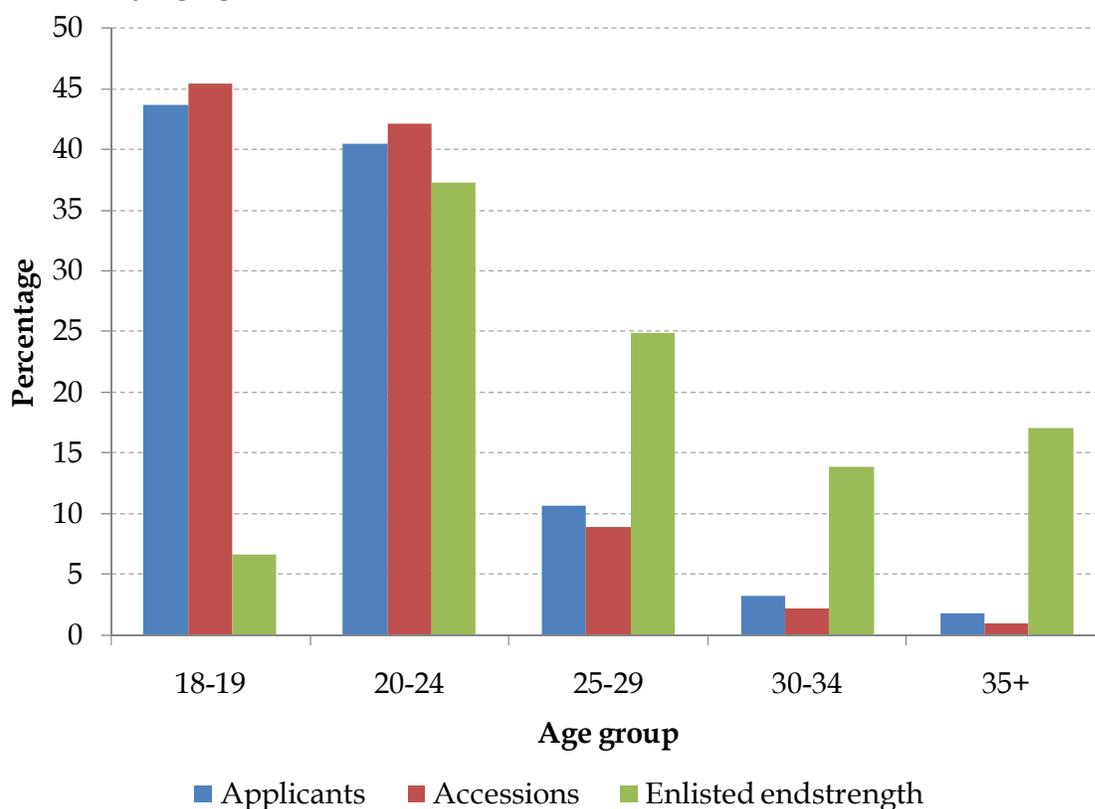


Note: Data are from appendix table D-3. Enlisted accessions include only NPS enlisted personnel. Applicant data are not available prior to FY76.

When we compare FY10 applicants with enlisted accessions, we find that accessions were slightly younger than applicants (see figure 5).<sup>10</sup> Roughly, 85 percent of both applicants and accessions were 18 to 24 years old in FY10.

Marine Corps applicants, in particular, were much younger than other DOD applicants (see appendix table A-1). Thirty-two percent were 16 to 17 years old, as compared with 15 percent in the Air Force, 12 percent in the Navy, and 11 percent in the Army. As a result, accessions were also much younger in the Marine Corps. Thirty-nine percent were 18 years old, as compared with 23 percent in the Air Force, 21 percent in the Army, and 19 percent in the Navy (see appendix table B-1).<sup>11</sup>

**Figure 5. AC enlisted applicants, NPS enlisted accessions, and enlisted endstrength, by age group, FY10**



Note: Data are from appendix tables A-1, B-1, and B-16. Enlisted accessions include only NPS enlisted personnel.

<sup>10</sup> Because enlisted endstrength data are not available for 17 year olds, we restrict the data to those aged 18 and older in order to make comparisons between the age distributions of applicants, accessions, and enlisted endstrength. Accessions cannot be younger than 17 years old. Even then, a 17-year-old accession requires parental consent to enter the military service. In appendix table A-1, we see that 16 percent of all enlisted applicants for AC were 16 or 17 years old, while 2 percent of accessions were 17 years old and 24 percent were 18 years old (appendix tables B-1).

<sup>11</sup> The age breakdown by service is available in the appendix tables for applicants and accessions but not for each service's total endstrength.

## Quality of enlisted applicants and accessions

DoD sets quality standards for the aptitude and educational background of recruits. The Armed Forces Qualification Test (AFQT), a nationally normalized test of math and verbal skills, measures aptitude, which is used to predict training and job performance. DoD requires that 60 percent of its accessions score in the 50th percentile or higher. In FY10, 72 percent of accessions did so. Virtually all remaining accessions scored above the 35th percentile.

In addition, DoD requires that at least 90 percent of recruits be classified as Tier 1, high school diploma graduates. The type of education credential earned by a recruit predicts how well the recruit will adapt to the military lifestyle. Traditional high school diploma graduates are more likely to complete their first years of service than recruits with alternate credentials. The majority of recruits with Tier 1 credentials are those who graduated from a traditional high school with a high school diploma; those with an adult education diploma or with one semester of college are also included in Tier 1 to increase enlistment opportunities for those with non-traditional credentials. Also included in Tier 1 are those with associates, bachelors, or graduate degrees.<sup>12</sup> A recruit is considered “high quality” if he or she has a Tier 1 education credential *and* scores above the 50th percentile on the AFQT.

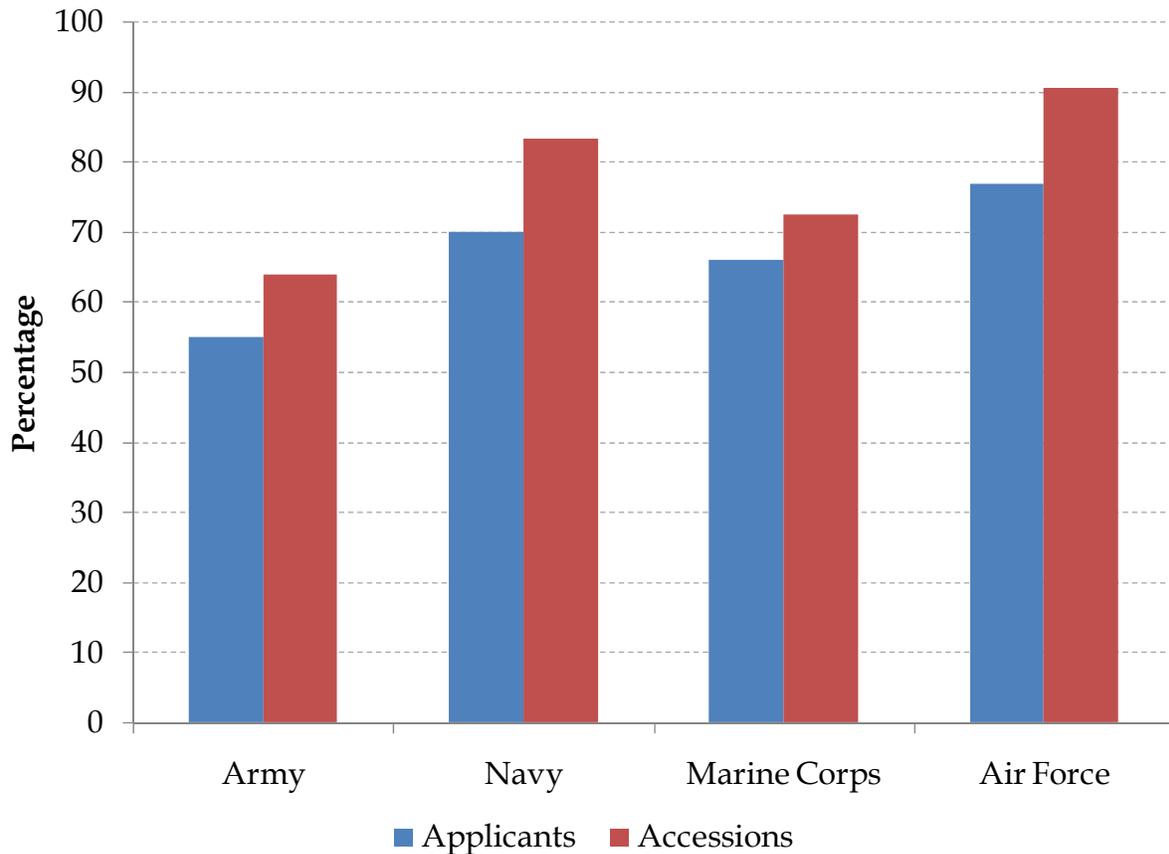
In figure 6, we show the percentage of FY10 applicants and enlisted accessions who scored at or above the 50th percentile on the AFQT. The Air Force had the highest percentage of applicants in this group (77 percent), followed by the Navy (70 percent), the Marine Corps (66 percent), and the Army (55 percent). As nearly all DoD applicants had Tier 1 educational credentials (95.6 percent), the main delineation for becoming a high-quality applicant or accession is the AFQT score.

Across the DoD services, a higher proportion of male than female applicants scored in the AFQT’s 50th percentile or above; overall, 57 percent of female applicants and 66 percent of male applicants scored in the top half of the distribution (see appendix tables A-4 and A-5). The percentage of female applicants who scored in the top half of the AFQT distribution was highest in the Air Force (68 percent) and lowest in the Army (48 percent).

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<sup>12</sup> Tier 2 educational credentials include a General Education Degree (GED) or alternate credential, and those with Tier 3 credentials are non-high school graduates.

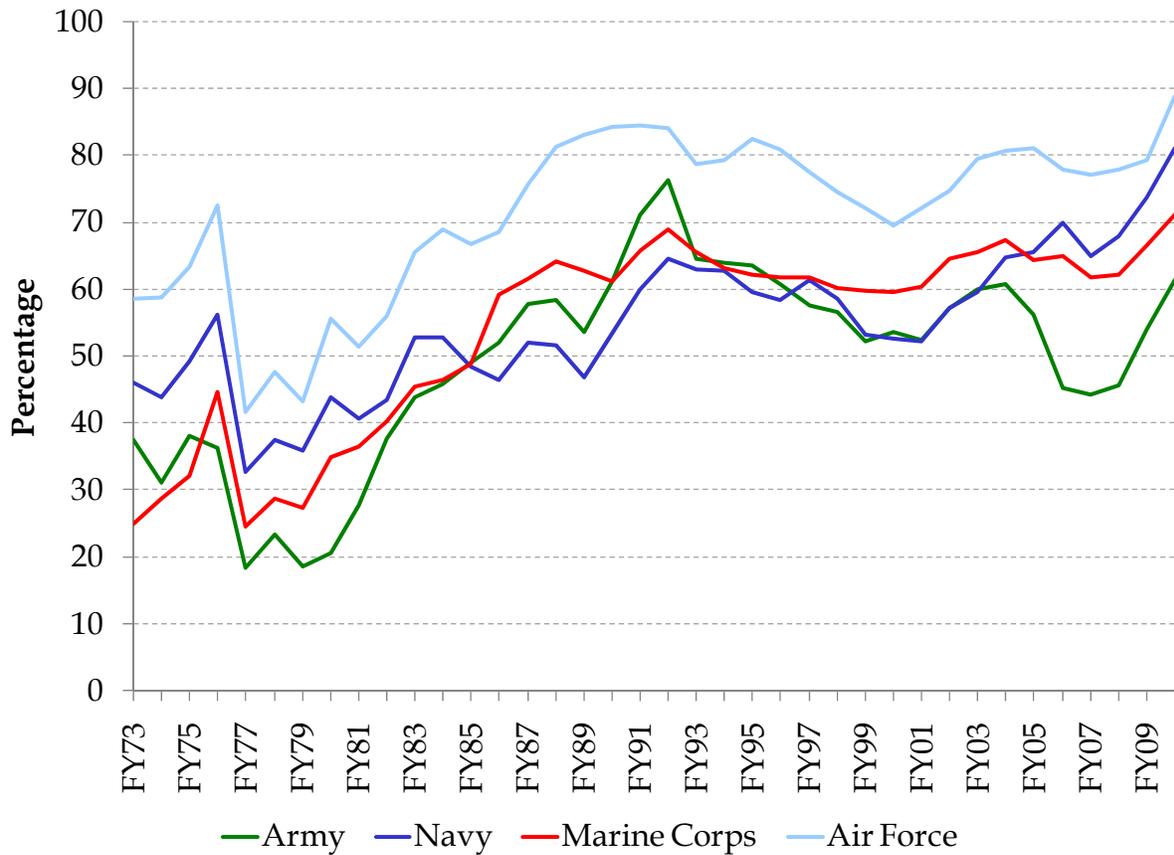
**Figure 6. Percent at or above the 50<sup>th</sup> percentile on the AFQT, AC enlisted applicants and NPS accessions, by service, FY10.**



Note: Data are from appendix tables A-4, A-6, B-4, B-6, and B-8. Enlisted accessions include only NPS enlisted personnel. Data on high quality applicants are not available.

When comparing the percentage of high-quality accessions over time, we find significant increases between FY73 and FY10 (see figure 7). Between FY78 to FY85, each service gained 20 to 30 percentage points in high-quality accessions – driven by both an increase in high school graduation rates and an increase in recruits’ AFQT scores. Of all the services, the Air Force had the highest percentage of high-quality recruits from FY73 to FY10. From FY77 to FY10, the percentage of high-quality recruits increased in all services: the Army made the largest strides, more than tripling its share of high-quality accessions from 18.3 to 61.4 percent, followed by the Marine Corps, which almost tripled its percentage from 24.5 to 71.1 percent. The Navy and the Air Force more than doubled their high-quality accession shares; the Navy went from 32.8 percent of accessions being high quality in FY77 to 81.0 percent in FY10, and the Air Force went from 41.7 to 88.8 percent.

**Figure 7. Percent high quality, AC NPS enlisted accessions, by service, FY73–FY10.**



Note: Data are from appendix table D-9. Enlisted accessions include only NPS enlisted personnel.

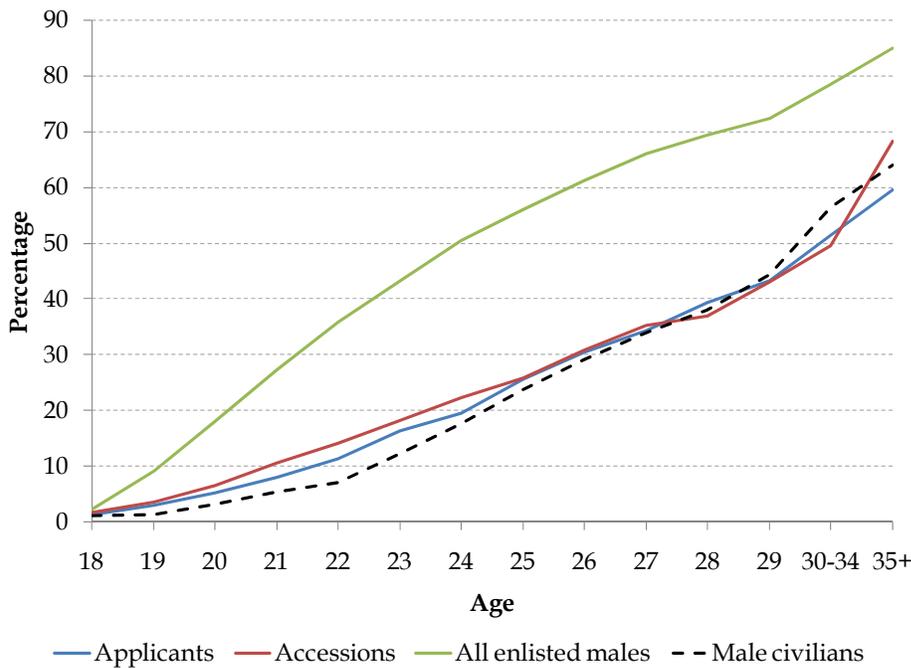
## Marital status of AC enlisted personnel

In this subsection, we contrast the marriage rates of AC applicants, enlisted accessions, and enlisted endstrength with the comparable civilian population.

Men in the enlisted force, especially those 20 years and older, are considerably more likely than their civilian counterparts to be married. While figure 8 shows data for FY10, the differences are long-standing. In contrast, both male applicants and enlisted accessions closely approximate the age-specific marriage rates of their civilian counterparts.

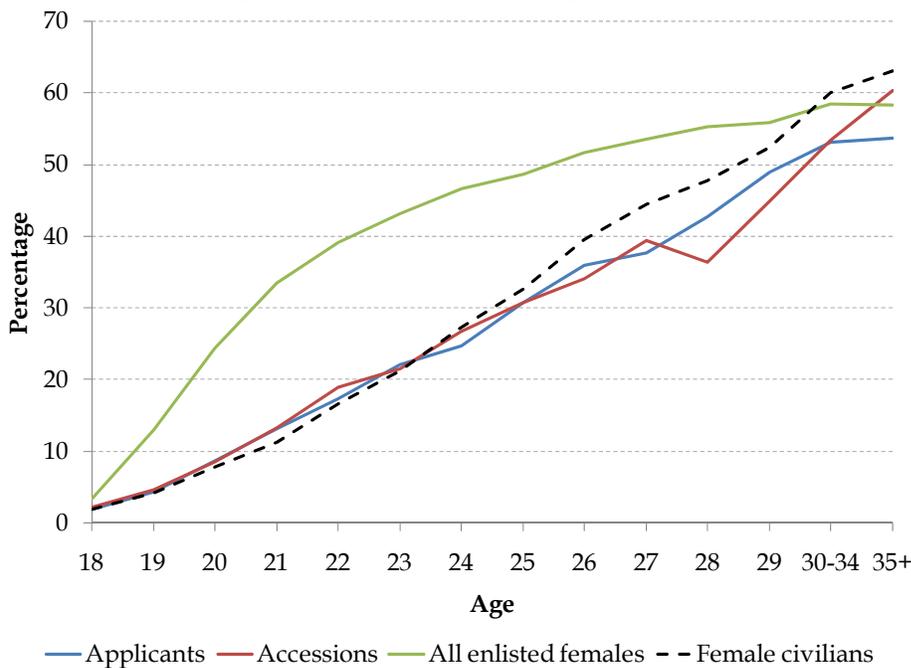
Women enlisted in the military are more likely to be married than civilian women until age 30 (see figure 9). At age 30 and above, however, civilian women are more likely than military women to be married. Age-specific marriage rates for female applicants and accessions are similar to those of civilian women. Since marriage rates are higher among all enlisted servicemembers than among enlisted accessions, it follows that servicemembers are getting married while they are in the military.

**Figure 8. Male marriage rates of AC enlisted applicants, NPS enlisted accessions, enlisted endstrength, and civilians, by age, FY10**



Note: Data are from appendix tables A-2, B-2, and B-16. Enlisted accessions include only NPS enlisted personnel.

**Figure 9. Female marriage rates of AC enlisted applicants, NPS enlisted accessions, enlisted endstrength, and civilians, by age, FY10**



Note: Data are from appendix tables A-2, B-2, and B-16. Enlisted accessions include only NPS enlisted personnel.

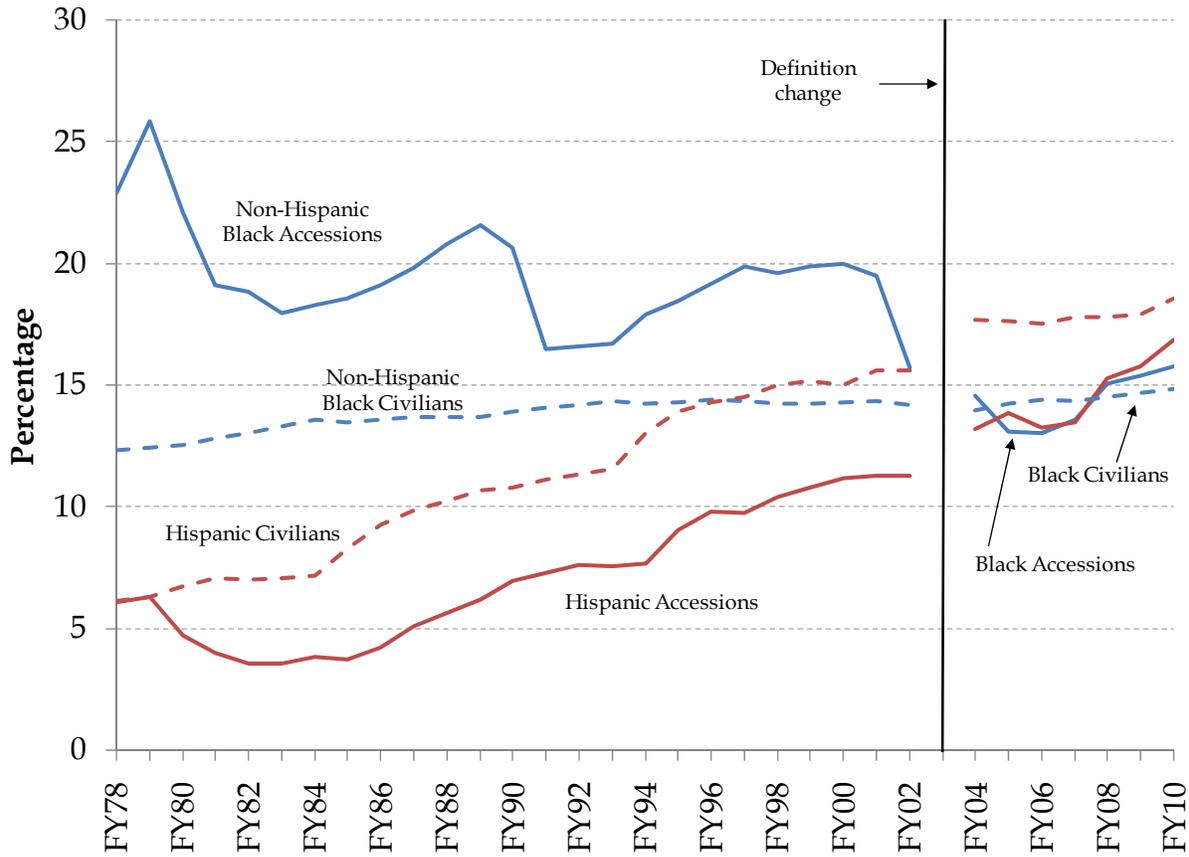
## **Race and ethnicity of AC accessions, enlisted force, and officer corps**

Prior to FY03, self-identified race and ethnicity were reported in combined categories (e.g., non-Hispanic white or non-Hispanic black). Since FY03, race and ethnicity are reported separately; the ethnic category is either Hispanic or non-Hispanic. While a Hispanic accession can be of any race, the vast majority identify themselves as white. In FY10, 72.3 percent of Hispanic accessions identified themselves as white and 8.4 percent identified themselves as black. Also in FY03, a category for two or more races was added; 8.7 percent of FY10 Hispanic accessions and 3.9 percent of non-Hispanic accessions claimed two or more races (see appendix table B-10). Figures 10 and 11 present data from single race categories for enlisted accessions and civilians. We indicate the change in race and ethnicity definitions in these figures with a vertical line.

In figure 10, we compare the Hispanic and black proportions of DoD accessions with those of the 18 to 24 year-old civilian population. The Hispanic population has grown rapidly. In FY78, Hispanics made up 6 percent of both accessions and comparatively aged civilians; in FY10, they made up 17 percent of accessions and 19 percent of civilians. In FY10, Hispanics were proportionally most represented in the Navy (24 percent), in the Marine Corps (18 percent) and the Air Force (18 percent), but remained underrepresented in the Army (12 percent, see appendix table D-26).

Prior to FY03, the percentage of non-Hispanic blacks was larger in DoD accessions than in the comparatively-aged civilian population. There was a sharp decline in non-Hispanic black accessions after the first Gulf War, but since FY03, the percentages of black accessions and black civilians are similar.

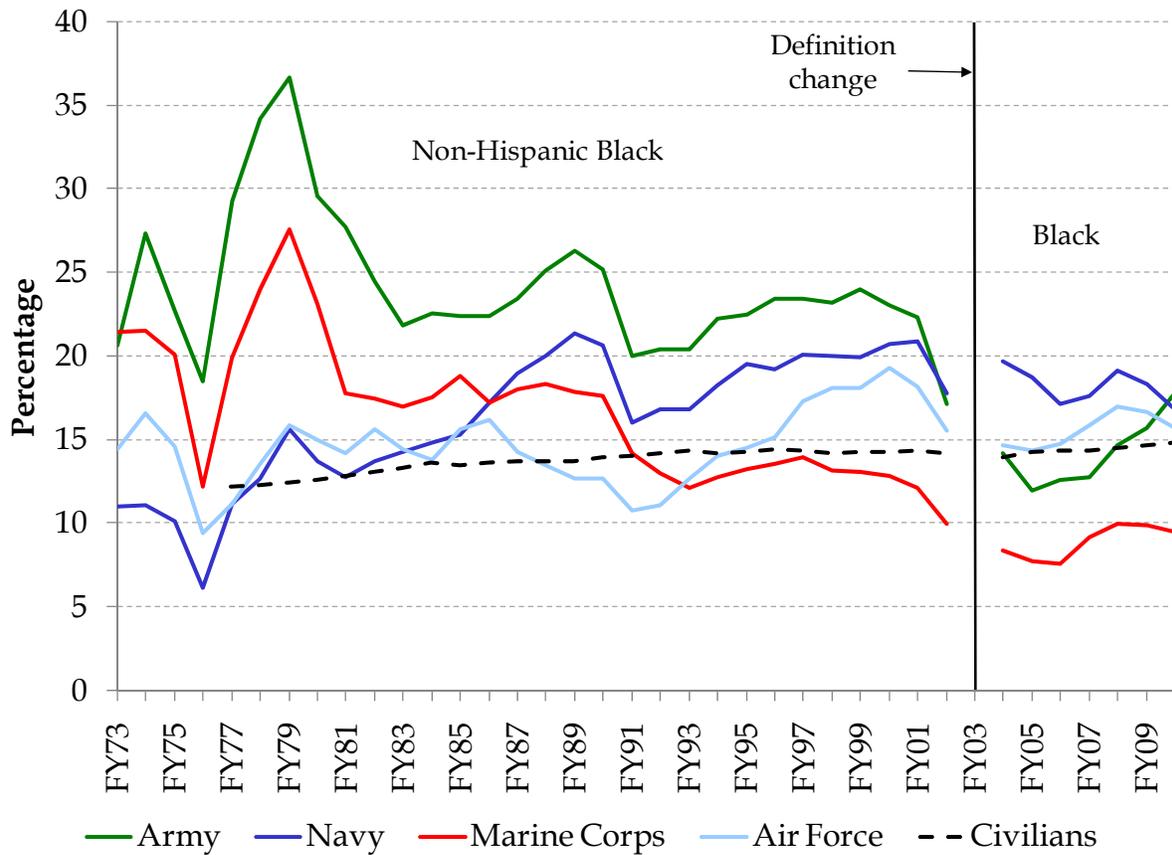
**Figure 10. Percent black or Hispanic, AC NPS enlisted accessions and 18 to 24 year-old civilians, FY78-FY10**



Note: Accession and civilian data are from appendix tables D-22 and D-23. Enlisted accessions include only NPS enlisted personnel.

Historically, the Army has had the highest percentage of non-Hispanic black accessions of all the services (see figure 11), considerably exceeding the comparable civilian population. Since FY03, however, blacks represented a higher percentage of accessions in the Navy than in other services.

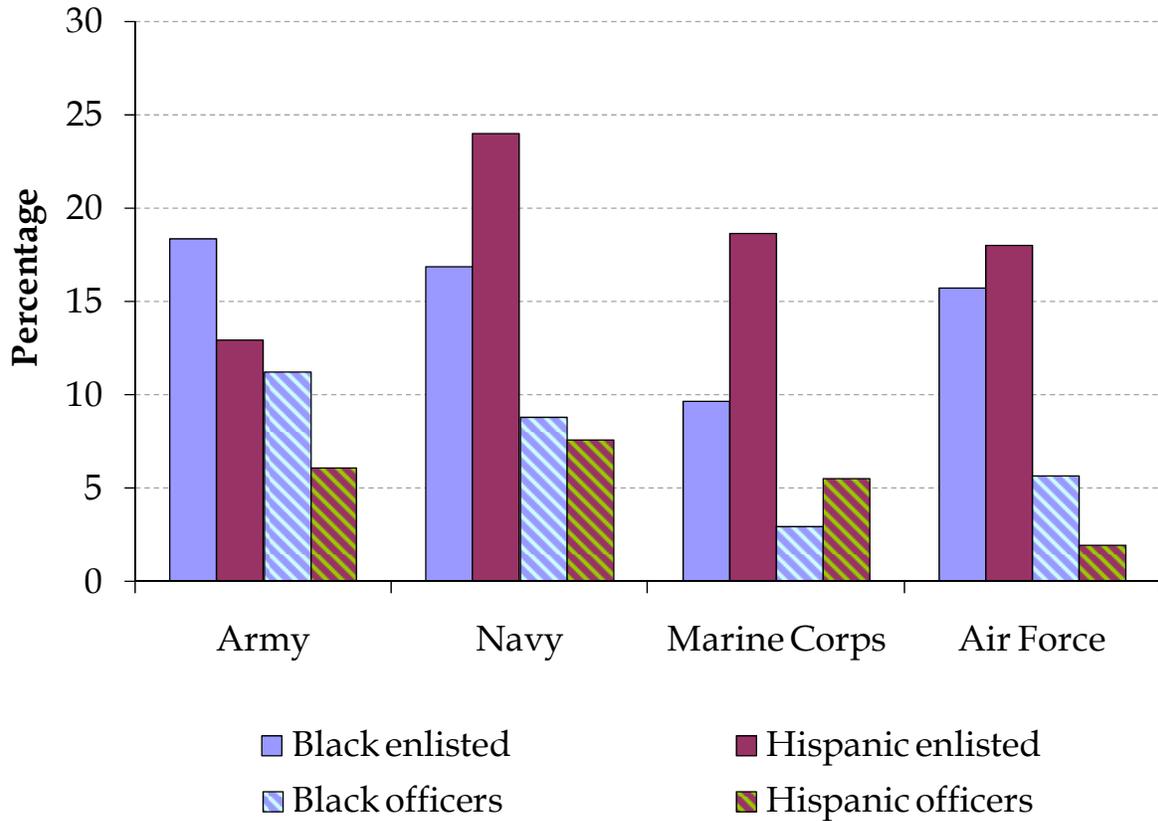
**Figure 11. Percent black, AC NPS enlisted accessions, by service, FY73–FY10**



Note: Data for FY03 to FY10 accessions and 18 to 24 year-old civilians are from appendix table D-26. Data for FY73 to FY02 accessions and civilian college graduates are from appendix table D-6 in the FY02 Pop Rep report. Enlisted accessions include only NPS enlisted personnel.

We find that enlisted accessions were more diverse than officer gains in FY10 (see figure 12). In FY10, 51 percent of Navy enlisted accessions were non-white, and roughly one-third of the other services’ accessions were non-white (see appendix table B-10). Racial and ethnic diversity among officer gains was similar across the services, with less than one-quarter coming from a minority group. The Navy had the highest percentages of Hispanic enlisted accessions and officer gains, and the Army had the highest percentages of black accessions and gains. The difference between the percentages of enlisted accessions and officer gains that were black was largest in the Air Force (10.1 percentage points) and smallest in the Marine Corps (6.7 percentage points). The difference between the percentages of enlisted accessions and officer gains that were Hispanic was largest in the Navy (16.4 percentage points) and smallest in the Army (6.9 percentage points).

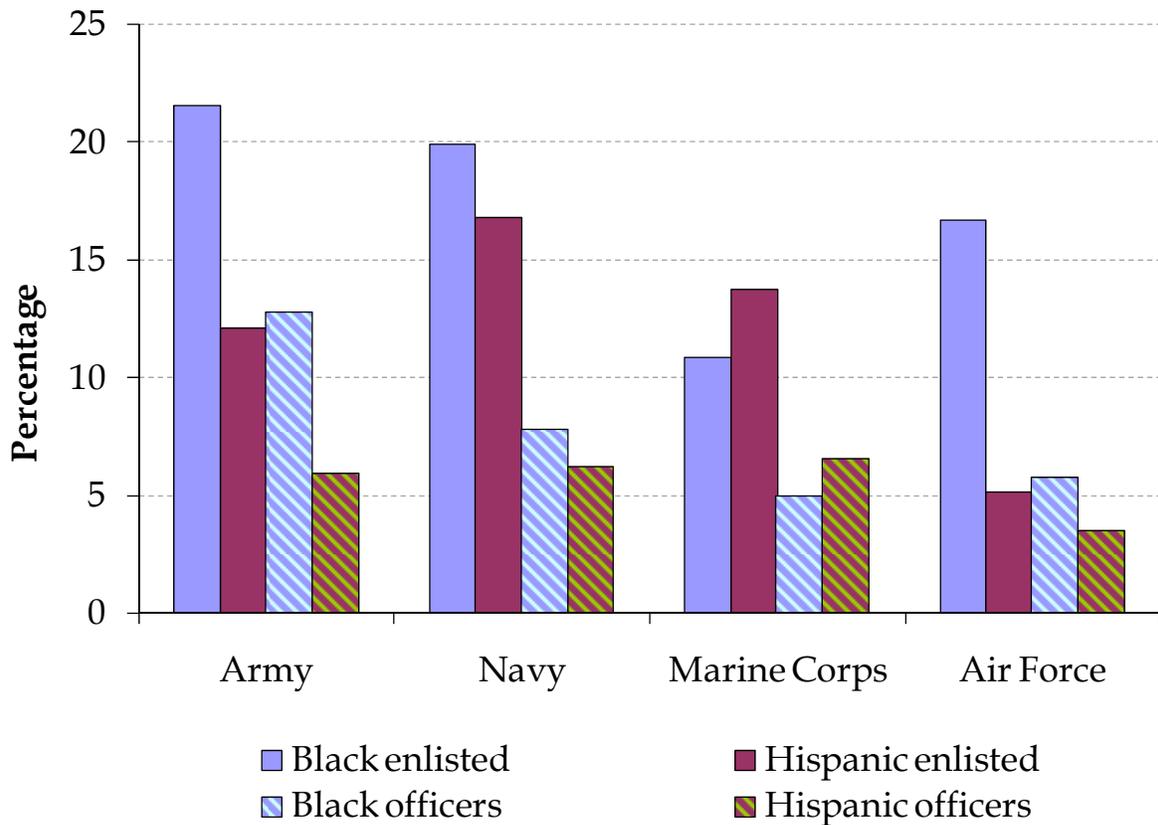
**Figure 12. Percent black or Hispanic, AC NPS enlisted accessions and officer gains, by service, FY10**



Note: Data are from appendix tables B-10 and B-25. Enlisted accessions include only NPS enlisted personnel.

In FY10, a higher percentage of endstrength (enlisted and officer) was black than Hispanic in all services but the Marine Corps (see figure 13). The percentages of black enlisted personnel and officers were highest in the Army and lowest in the Marine Corps. The percentage of Hispanics in the enlisted force was highest in the Navy. For the officer corps, the Marine Corps' had the highest percentage of Hispanics.

**Figure 13. Percent black or Hispanic, AC enlisted endstrength and officer corps, by service, FY10**



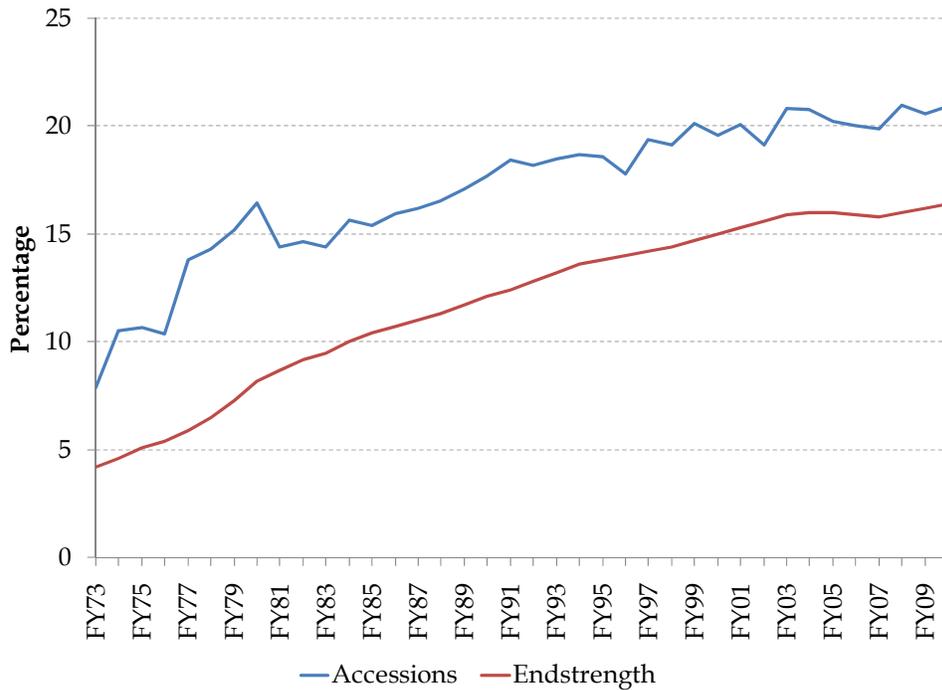
Note: Data are from appendix tables B-17 and B-25.

## Women in AC accessions, enlisted endstrength, and the officer corps

In this subsection, we discuss historical trends in female representation in enlisted accessions, enlisted endstrength, and the officer corps.

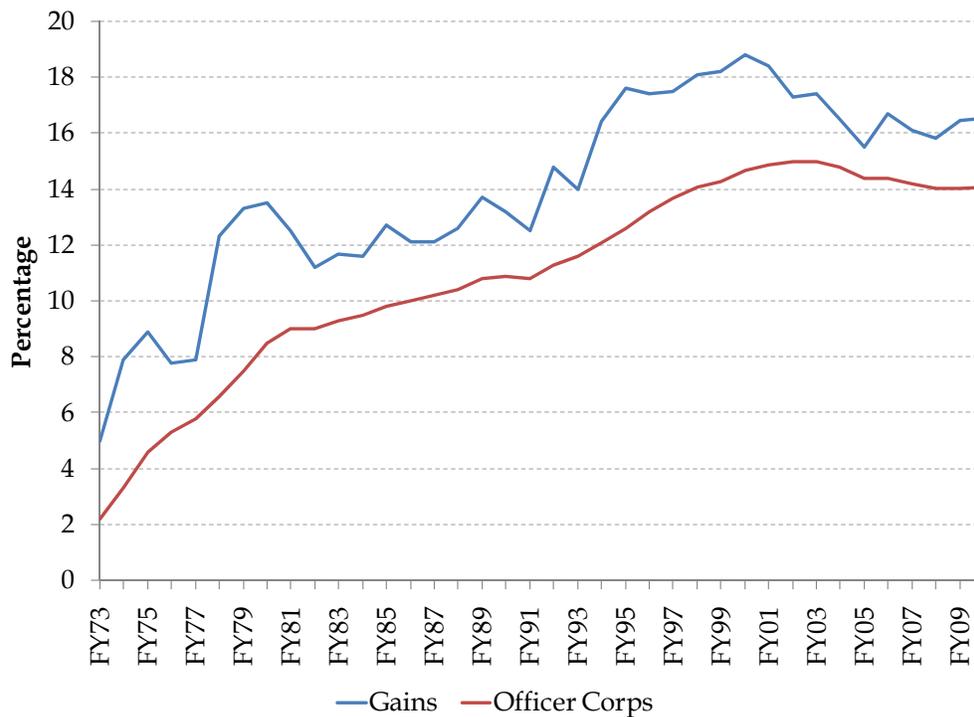
Figures 14 and 15 display the percentage of female DoD enlisted accessions or officer gains and their respective endstrengths. The percentage of female strength in the enlisted force and in the officer corps have been increasing over time, with some flattening of the enlisted trend in recent years. Female enlisted accessions and female officer gains are more volatile than are endstrength numbers.

**Figure 14. Female share of NPS enlisted accessions and enlisted endstrength, FY73-FY10**



Note: Data are from appendix tables D-5 and D-16. Enlisted accessions include only NPS enlisted personnel.

**Figure 15. Female share of officer gains and officer corps, FY73-FY10**



Note: Data are from appendix tables D-16 and D-19.

In FY70, no service had more than a 6-percent female share of enlisted accessions. Between FY70 and FY05, the Air Force was the most female, followed by the Army, the Navy, and the Marine Corps. The percentage of female enlisted accessions in the Air Force increased sharply to 20 percent during the 1970s; the Air Force led the services in terms of female accessions during the 1980s, and, by the late 1990s, female accessions rose to over 25 percent. Since then, the percentage of female accessions in the Air Force has fallen. The Army had a similar female accession pattern, but at a lower scale — peaking at 20 percent in FY00. Like the Air Force, the Army has seen its share of female enlisted accessions fall since the late 1990s. The Navy’s percentage of female accessions tracks just below the Army’s, but instead of falling since the late 1990s, the percentage of women rose from 16 percent in FY06 to 22 percent in FY10 — overtaking both the Army and Air Force. In FY10, less than 10 percent of Marine Corps accessions were female.

## **Geographic representation of AC enlisted accessions<sup>13</sup>**

In this subsection, we describe where enlisted accessions come from.

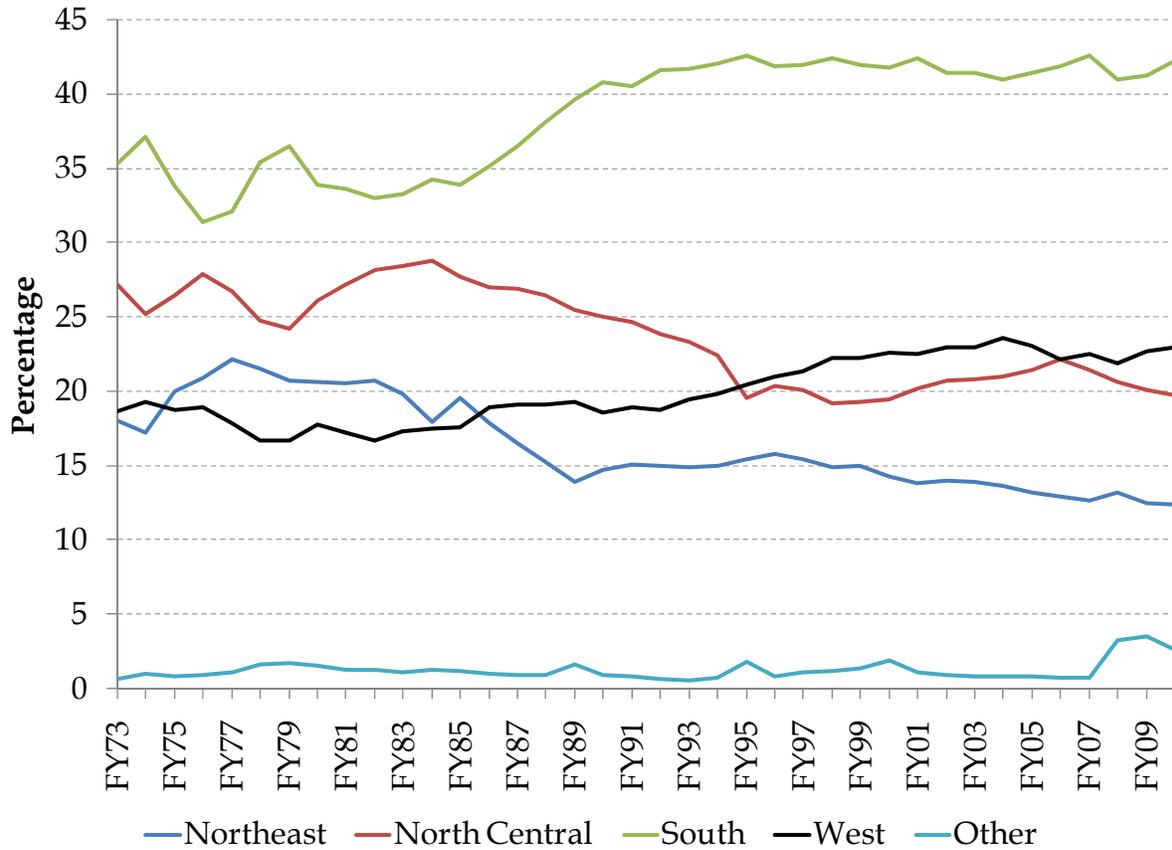
There are marked differences in the regional affiliation of accessions before and after FY85 (see figure 16). The Census Bureau divides the country into four regions: Northeastern, North Central, South, and West. The Northeast includes states in the New England and Middle Atlantic Census divisions; the North Central region includes states in the East North Central and West North Central divisions; the South includes states in the South Atlantic, East South Central, and West South Central divisions; and the West region includes states in the Mountain and Pacific divisions. For completeness, accessions from U.S. territories, possessions, or “unknown” regions are grouped together in the “other” category.

From FY73 to FY85, roughly 35 percent of enlisted accessions came from the South and 25 percent from the North Central region, while the remaining 40 percent of accessions came from the West and the Northeast. After FY85, accessions were drawn more heavily from the South and the West and less so from the Northeast and North Central regions. This reflects general population trends, as the “Sunbelt” states in the South and West regions made up an increasingly larger share of the U.S. population in the 1980s and 1990s. Recruiting commands take into account the geographic shifts in population, as well as the propensity to serve, as they place recruiters across the country. In this way, they can determine where the majority of accessions will come from.

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<sup>13</sup> Data on the geographic representation of AC enlisted endstrength, officer gains, and the officer corps are not available in the technical appendixes.

**Figure 16. Geographic distribution of NPS enlisted accessions, FY73–FY10**



Note: Data are from appendix table D-10. Enlisted accessions include only NPS enlisted personnel. In this analysis, we use the geographic regions as defined by the Census Bureau. The Northeast region includes states in the New England and Middle Atlantic Census divisions; the North Central region includes states in the East North Central and West North Central divisions; the South region includes states in the South Atlantic, East South Central, and West South Central divisions; the West region includes states in the Mountain and Pacific divisions; and “other” includes territories, possessions, and unknowns.

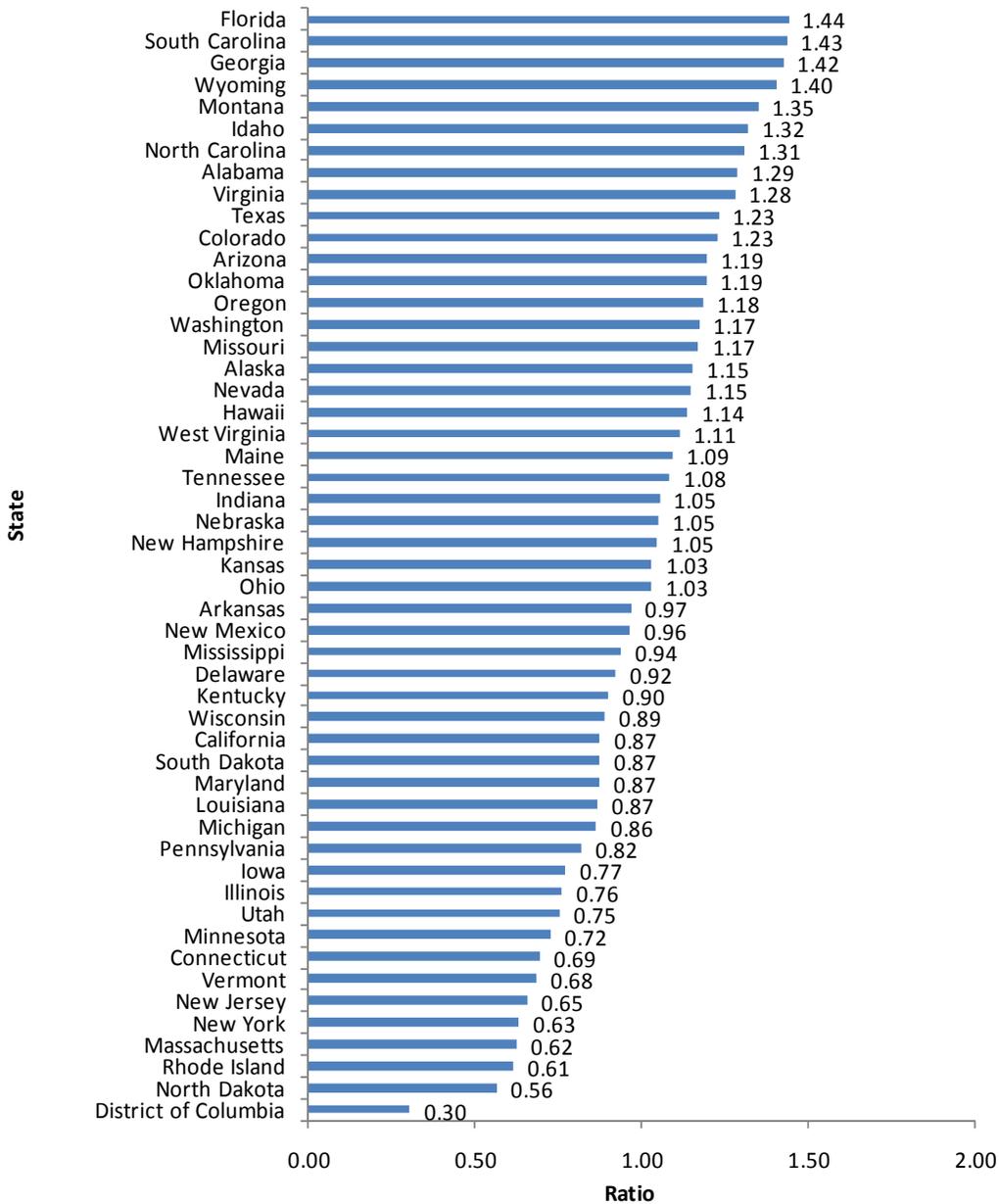
In figure 17, we show the ratio of a state’s FY10 accession share to the state’s share of the U.S. 18 to 24 year-old population. A ratio of one implies that a state’s share of DoD accessions was equal to its share of 18 to 24 year-olds. A ratio greater than one implies that relative to its proportion of the 18 to 24 year-old population, the state had a larger percentage of accessions. A ratio of less than one implies a smaller percentage of accessions relative to a state’s proportion of the 18 to 24 year-old population.

The FY10 ratios ranged from 0.30 to 1.44. No state had a ratio of one – where its share of accessions matched its share of the 18 to 24 year-old population. Twenty-seven states could be considered overrepresented in accessions (ratios greater than one), while 23 states and the District of Columbia (D.C.) could be considered underrepresented (ratios less than one). Florida had the highest ratio at 1.44. Specifically, 7.5 percent of FY10 enlisted accessions came from Florida, which is home to only 5.2 percent of the 18 to 24 year-old U.S. population. D.C. contributed the fewest accessions relative to its age-

relevant population, with a representation ratio of 0.30. Only 0.07 percent of new recruits were from D.C., but 0.22 percent of 18 to 24 year-olds lived in D.C. Differences in the ratios can be explained by several factors, including the following:

- The available recruiting resources in a state
- A higher share of the age-relevant population that is qualified to enlist
- An age-relevant population with a higher propensity to enlist

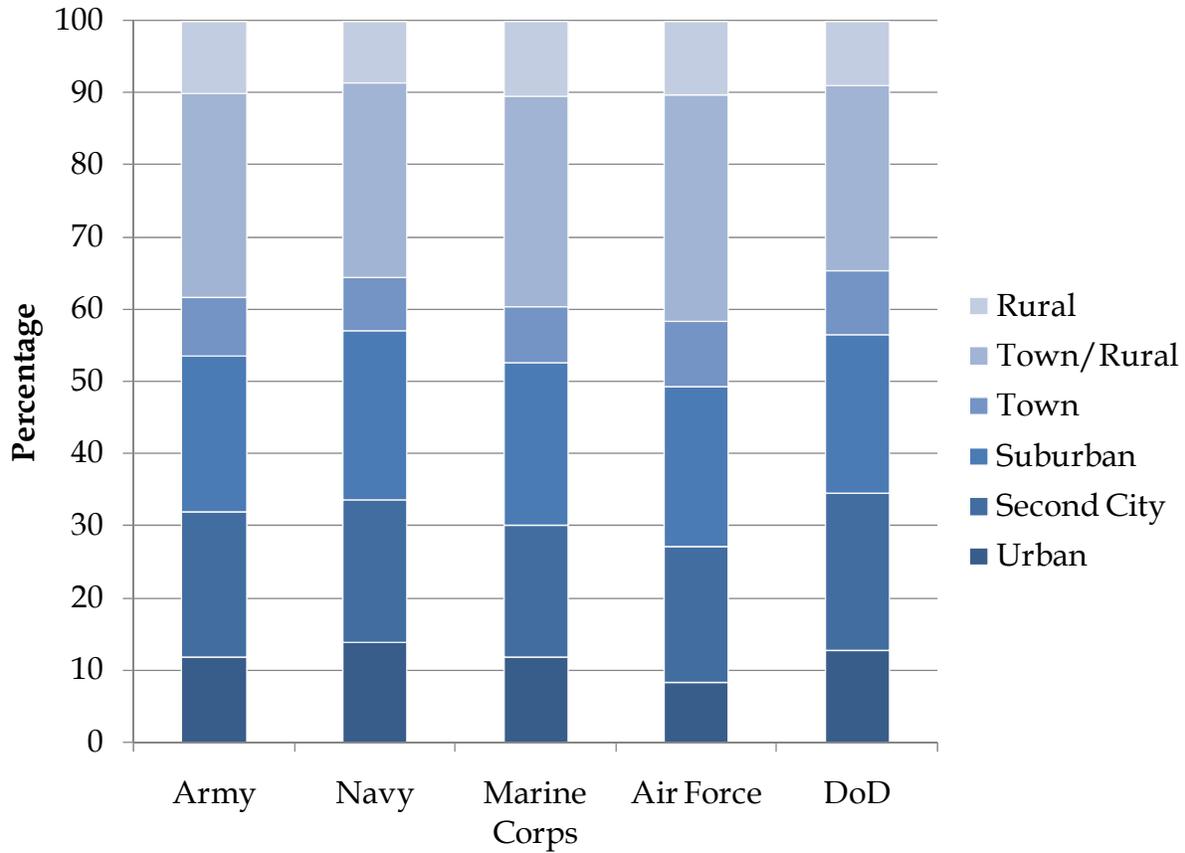
**Figure 17: Enlisted accession-share-to-civilian-share ratios, by state, FY10**



Note: Data are from appendix table B-46. Enlisted accessions include only NPS enlisted personnel.

Next, we look to the urbanicity of accessions' home communities in figure 18. Urbanicity is defined by an area's population density. To illustrate the differences in population density, the bars in figure 18 get progressively lighter. The darkest portions (bottom of the graph) represent the percentage of enlisted accessions that come from urban communities (most dense), and the lightest portions (top of the graph) represent the percentage of accessions that come from rural areas (least dense).

**Figure 18. Urbanization of home communities of AC NPS enlisted accessions, by service, FY10**



Note: Data are from appendix table B-41. Enlisted accessions include only NPS enlisted personnel. The Claritas Demographic Estimation Program defines areas by population density: urban areas are the most dense and rural areas are the least dense. Second cities are closer in population density to suburban than urban areas, but are the population center of the surrounding community.

This section highlighted trends in the AC of the DoD services. In the next section, we consider the RC.